

Message

From: Chesnutt, John [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP (FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=E1CD369E94474C2C8A876FB16943320A-JCHESNUT]
Sent: 12/14/2016 8:05:18 PM
To: LEE, LILY [LEE.LILY@EPA.GOV]
Subject: RE: Followup - technical conference calls and resending contact info for EPA health physicists

Perfect. Thanks.

From: LEE, LILY
Sent: Wednesday, December 14, 2016 12:03 PM
To: Brooks, George P CIV <george.brooks@navy.mil>; zachary.edwards@navy.mil; matthew.slack@navy.mil
Cc: Robinson, Derek J CIV NAVFAC HQ, BRAC PMO <derek.j.robinson1@navy.mil>; Janda, Danielle L CIV <danielle.janda@navy.mil>; juanita.bacey@dtsc.ca.gov; Chesnutt, John <Chesnutt.John@epa.gov>; Kappelman, David <Kappelman.David@epa.gov>; Nguyen, Lyndsey <Nguyen.Lyndsey@epa.gov>; jdawson@techlawinc.com; Karla Brasaemle (kbrasaemle@techlawinc.com) <kbrasaemle@techlawinc.com>
Subject: Followup - technical conference calls and resending contact info for EPA health physicists

Dear Pat, Zach, and Matt,

I hope you are well. John Chesnutt, my manager, told me that on a Monday managers' call, you agreed to regular (weekly or biweekly?) conference calls at the suggestion of Janet from DTSC. That would be helpful. Please let me know what times work for you, and I'll invite EPA's health physicists.

John also told me the Navy expressed concern that the limits to EPA's information may have led us to wrong conclusions. It would be great to get more correct and complete information for clarification of the facts.

In addition to regular meetings, feel free to talk directly to EPA's health physicists. I am resending their contact information below. All of them are aware of the full set of issues. For more specific context:

- Dave attended the June 2016 site visit and has two decades of experience on rad cleanups for EPA's national Environmental Response Team.
- Lyndsey did most of the PRG calculations re soil, recommended the health-risk prioritization approach, and discovered the decay chain discrepancies.
- Jana did most of the BPRG calculations re buildings. She has years of experience doing data validation.

Because Jana is a contractor, we'll need to coordinate for me to join any calls you do with her. But go ahead and talk to Dave or Lyndsey without me. Lyndsey is out of the country for the holidays, however.

I look forward to the weekly or bi-weekly technical check-in calls that will help make sure we're all understanding the full facts so our recommendations and reviews can be well-informed, focused, and efficient. For example, below are some technical clarification questions I had asked in October. I had other questions from earlier months, and I will search for those as well. Please let me know when regular calls will be so I can prioritize these times on our calendars.

Thanks!

- Lily

From: LEE, LILY
Sent: Tuesday, October 4, 2016 11:59 AM
To: matthew.slack@navy.mil; zachary.edwards@navy.mil
Cc: Robinson, Derek J CIV NAVFAC HQ, BRAC PMO <derek.j.robinson1@navy.mil>; Fairbanks, Brianna

<fairbanks.brianna@epa.gov>; David Kappelman (Kappelman.David@epa.gov) <Kappelman.David@epa.gov>; Nguyen, Lyndsey <Nguyen.Lyndsey@epa.gov>; Chesnutt, John <Chesnutt.John@epa.gov>

Subject: Followup on your requests and contact info for EPA attorney & health physicists

Dear Zach and Matt,

Thank you for meeting yesterday. It is tremendously valuable to get more detailed facts to help move forward in an efficient and well-informed way.

As you requested, here is contact information for Brianna, EPA's Region 9 attorney assigned to the Superfund program's work at Hunters Point. She said she would be happy to talk with your attorney.

Brianna Fairbanks, Attorney/Advisor, EPA Region 9
(415) 972-3907
Fairbanks.brianna@epa.gov

In addition, please feel free to work directly with Lyndsey and Dave, health physicists that EPA headquarters has assigned in response to Region 9's request for support on these issues. They were both on the call yesterday. David Kappelman attended the site walk with Matt.

David Kappelman
Environmental Response Team – Cincinnati
Desk 859-594-6540
Cell: 513-240-6840
Kappelman.david@epa.gov

Lyndsey Nguyen
Environmental Response Team-Las Vegas
Phone: 702.784.8018
Cell: 702-373-3756
Email: Nguyen.Lyndsey@EPA.gov

Also, we will work on your request to calculate risks using the EPA PRG Calculator. I'm glad you suggested giving us information to make sure the model inputs are as fact-based as possible. What would be a good time to talk about that?

Thank you again,

Lily

From: LEE, LILY

Sent: Friday, November 25, 2016 3:23 PM

To: Derek Robinson (derek.j.robinson1@navy.mil) <derek.j.robinson1@navy.mil>; Janda, Danielle L CIV <danielle.janda@navy.mil>

Cc: jdawson@techlawinc.com; Karla Brasaemle (kbrasaemle@techlawinc.com) <kbrasaemle@techlawinc.com>; juanita.bacey@dtsc.ca.gov

Subject: Set up technical call re specifics of the history of work in buildings?

Dear Derek,

I hope you had a good Thanksgiving. I wanted to introduce you virtually to Jana Dawson (Health Physicist for Techlaw, EPA's contractor). She is doing some calculations, but she would like more specific information about the buildings, methods, etc. to make sure she's using the right assumptions. You had kindly offered that Navy technical staff could talk

with her to make sure we understand the facts. She already has the FSSR for Bldg 271 and the RACR Addendum for Parcels B&G as well as all the new information Danielle just gave me. Feel free to have your technical contacts contact Jana directly at jdawson@techlawinc.com. I have cc'ed her above.

If they could cc me and Karla on when they'd like to talk, Karla and/or I would like to join if the timing works out so we can understand the facts better too.

Thanks!

- Lily

Lily Lee
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From: LEE, LILY

Sent: Tuesday, November 1, 2016 11:50 AM

To: zachary.edwards@navy.mil; matthew.slack@navy.mil

Cc: Robinson, Derek J CIV NAVFAC HQ, BRAC PMO <derek.j.robinson1@navy.mil>; Janda, Danielle L CIV <danielle.janda@navy.mil>; Nguyen, Lyndsey <Nguyen.Lyndsey@epa.gov>; Chesnutt, John <Chesnutt.John@epa.gov>

Subject: EPA PRG calculator risk estimates - let's talk

Dear Zach and Matt,

It was good to talk with you Oct. 3. As you requested, we are working on using the EPA PRG calculator to evaluate potential risks from radiation at the Shipyard. Thank you for your offer to discuss what parameters are appropriate based on your detailed knowledge of the site conditions. These facts will help make the estimates technically sound. For example, the questions below that I sent last Monday will help us see if we're understanding the situation correctly.

As a starting point, EPA headquarters Health Physicist Lyndsey Nguyen was interested in the highest concentrations that have been documented at the site historically as a potential indicator of risk of missing areas of contamination. (Of course, the sample locations where levels exceeded release criteria should have been removed long ago.) Lyndsey prepared the attached calculations based on the highest concentrations that appeared in the NIRIS spreadsheet that Danielle provided last spring that included 225,000 results since 1990. Attached are printouts of the assumptions that she used for a conservative and for a realistic scenario. The realistic scenario assumes 60 cm soil cover, no inhalation, no ingestion, and no consumption of homegrown produce. Of course we expect to refine PRG calculations based on your knowledge about the facts of the site. As you see below the highest concentrations exceed a 10^{-4} risk for 6 radionuclides in the conservative scenario and 3 radionuclides in the realistic scenario. Looking at the Ra-226 spreadsheet I sent you earlier with shallow samples (≤ 2 ft bgs), 182 locations exceed 10^{-4} risk in the realistic scenario.

We'd be interested in finding out how you are estimating risk using the Navy's approaches.

Let's talk soon about your thoughts on potential health risk. What would be a convenient date/time for you? Lyndsey and I will try to give you a call soon to follow up. In the mean time, feel free to call either of us at the numbers below.

Thanks!

- Lily

Note: This email contains predecisional, intra-agency communication, so FOIA exemption 5 could apply

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Cell: 702-373-3756
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From: Nguyen, Lyndsey
Sent: Tuesday, November 01, 2016 10:28 AM
To: LEE, LILY <LEE.LILY@EPA.GOV>
Subject: PRG Runs 1×10^{-4} risk

I took a look at the highest data for each radionuclide and ran two PRGs based off of the highest data from the excel spreadsheet:

1. Conservative Approach—I ran the PRG with the highest data for each radionuclide with zero cover. I kept inhalation and ingestion rates to default values. For a risk value, I went with EPA's achievable risk when determining if remediation is needed (i.e. 1×10^{-4}).

Isotope	Concentration (pCi/g)	Total Risk	Total PRG (pCi/g)
Ac-228	3.93E+00	5.01E-09	7.84E+04
Am-241	3.31E+00	7.05E-05	4.70E+00
Bi-212+D	4.07E+00	1.08E-10	3.77E+06
Bi-214+D	3.01E+00	3.72E-10	8.10E+05
C-14	3.05E+00	2.15E-05	1.42E+01
Co-60	2.05E-01	5.94E-06	3.45E+00
Cs-137	8.04E+01	3.99E-04	2.02E+01
Cs-137+D	8.04E+01	1.59E-03	5.04E+00
Eu-152	4.96E-01	1.21E-05	4.09E+00
Eu-154	8.37E-01	1.71E-05	4.89E+00
Eu-155	1.60E-01	6.25E-08	2.56E+02
H-3	6.40E+00	2.85E-05	2.25E+01
K-40	3.86E+01	9.76E-04	3.96E+00
Pa-234	7.69E-01	1.74E-09	4.42E+04
Pa-234m	2.10E-01	1.89E-14	1.11E+09
Pb-210	2.71E+01	3.65E-03	7.43E-01
Pb-212	3.82E+00	2.47E-09	1.54E+05
Pb-214	1.65E+01	3.68E-10	4.49E+06
Pu-238	1.02E-01	2.51E-06	4.06E+00
Pu-239+D	9.02E-02	2.53E-06	3.57E+00
Ra-226	8.05E+00	7.01E-04	1.15E+00
Ra-226+D	8.05E+00	1.23E-03	6.52E-01
Sr-90+D	5.23E+00	8.19E-05	6.39E+00
Th-228	8.10E-01	2.07E-06	3.91E+01
Th-230	9.41E+01	1.82E-03	5.18E+00
Th-232+D	3.59E+00	1.02E-03	3.51E-01
Th-234+D	1.15E+01	2.71E-07	4.24E+03
Tl-208	2.57E+00	1.22E-10	2.10E+06
U-234	6.08E-01	9.55E-06	6.37E+00
U-235+D	7.50E-01	1.54E-05	4.88E+00
U-238+D	7.86E+00	1.64E-04	4.79E+00
Zn-65	9.00E-02	1.32E-07	6.80E+01

2. Realistic Approach—I ran the PRG with the highest data for each radionuclide with 60 cm of soil (that's roughly 2ft) and I zero-ed out inhalation and ingestion due to the durable cover. Again, I ran the PRG with EPA's achievable risk of 1×10^{-4} . My results are:

Isotope	Concentration (pCi/g)	Total Risk	Total PRG (pCi/g)
Ac-228	3.93E+00	3.91E-09	1.01E+05
Am-241	3.31E+00	6.12E-07	5.41E+02
Bi-212+D	4.07E+00	8.07E-11	5.04E+06
Bi-214+D	3.01E+00	2.94E-10	1.03E+06
C-14	3.05E+00	1.86E-10	1.64E+06
Co-60	2.05E-01	4.53E-06	4.53E+00
Cs-137	8.04E+01	1.91E-07	4.22E+04
Cs-137+D	8.04E+01	9.44E-04	8.51E+00
Eu-152	4.96E-01	9.29E-06	5.34E+00
Eu-154	8.37E-01	1.29E-05	6.50E+00
Eu-155	1.60E-01	3.43E-08	4.66E+02
H-3	6.40E+00	-	-
K-40	3.86E+01	1.91E-04	2.02E+01
Pa-234	7.69E-01	1.36E-09	5.65E+04
Pa-234m	2.10E-01	1.50E-14	1.40E+09
Pb-210	2.71E+01	1.83E-07	1.48E+04
Pb-212	3.82E+00	7.39E-10	5.17E+05
Pb-214	1.65E+01	2.87E-10	5.74E+06
Pu-238	1.02E-01	4.35E-11	2.35E+05
Pu-239+D	9.02E-02	1.29E-10	7.02E+04
Ra-226	8.05E+00	1.18E-06	6.81E+02
Ra-226+D	8.05E+00	4.22E-04	1.91E+00
Sr-90+D	5.23E+00	5.17E-07	1.01E+03
Th-228	8.10E-01	3.31E-09	2.45E+04
Th-230	9.41E+01	5.43E-07	1.73E+04
Th-232+D	3.59E+00	9.14E-05	3.93E+00
Th-234+D	1.15E+01	3.06E-08	3.75E+04
Tl-208	2.57E+00	9.67E-11	2.66E+06
U-234	6.08E-01	1.05E-09	5.79E+04
U-235+D	7.50E-01	2.61E-06	2.87E+01
U-238+D	7.86E+00	6.29E-06	1.25E+02
Zn-65	9.00E-02	5.93E-08	1.52E+02

Lyndsey

Lyndsey Nguyen
Environmental Response Team-Las Vegas
Phone: 702.784.8018
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From: LEE, LILY

Sent: Monday, October 24, 2016 10:56 AM

To: Robinson, Derek J CIV NAVFAC HQ, BRAC PMO <derek.j.robinson1@navy.mil>

Subject: Clarifying questions re EPA's comments on Tech Memo outline

Dear Derek and Danielle,

I'm sorry for the delay getting comments to you on the Tech Memo outline. I've had trouble getting feedback from 2 final reviewers. But I haven't gotten any major new issues since the last time we talked in San Diego. But in our review, our technical staff have some clarifying questions that could help ensure we understand what the data mean, so that our recommendations can be prioritized based on facts. I appreciate your help!

1. Thank you Danielle for sending the NIRIS spreadsheet (as a reminder below I cut & pasted the "Search Criteria")
 - a. In the field "Site Name" What does Site 00001, Site 000002, Site 000014, and Site 000038 mean?
 - b. What does a blank in that field mean?
 - c. In "Analyte Value" did you subtract out background? Did you include daughter products?
 - d. In "Location Type Desc" what does "Radiation Test Station" mean? Could these be check samples?
2. Do you still have tuna cans with original soil samples available? I thought I had heard that RASO had requested them or could request them.
3. When did the Navy switch from time & materials to fixed price contracting?
4. When was Anthony Smith working at HPNS?
5. The Cs-137 samples below are marked "No" for "removed." But I know that some work was done in the Triangle 707 area, so I'm wondering if they were later removed. Attached is a spreadsheet that just shows shallow Cs-137 samples, ranked by analyte value.

LOCATION_NAME	ANALYTE_VALUE	COLLECT_DATE	CONTR_NAME
707A1	80.4	7/14/1999	TETRA TECH EM, INC.
707A3	75.7	7/14/1999	TETRA TECH EM, INC.
707A1-A	17.8	7/14/1999	TETRA TECH EM, INC.
707A3-A	13.9	7/14/1999	TETRA TECH EM, INC.
707A1-D	2.12	7/14/1999	TETRA TECH EM, INC.
707A2	1.25	7/14/1999	TETRA TECH EM, INC.
707A1-C	1.04	7/14/1999	TETRA TECH EM, INC.
707A2-C	0.62	7/14/1999	TETRA TECH EM, INC.
707A2-G	0.45	7/14/1999	TETRA TECH EM, INC.

Search Criteria for NIRIS pull that Danielle sent in spring, 2016:

Regions:	SOUTHWEST
Installations:	HUNTERS_POINT_NS
Sample Matrices:	Soil, Swab or wipe, Storm drain sediment, Sediment
Sample Types:	Normal (Regular)
Method Groups:	Radiation
Locations without Sites:	No
Detected:	All
Reportable:	All